

Eco Resort of Meridian Adventure Marina Club & Resort Hotel in Waisai, Raja Ampat

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ABSTRACT

Waisai, Raja Ampat is a beach-based tourism that has natural potential with an increasing number of tourist visitors, therefore the need for accommodation facilities in Raja Ampat also increasing. Designing the Interior of the Eco Resort in Waisai, Raja Ampat aims to provide lodging facilities in the tourist area of Raja Ampat that provide insight and inspiration to the public and tourists about the application of Eco-Interior and fostering concern for nature. The eco-interior application is carried out through an approach that appears in the designed facilities, namely the lobby, restaurant and guest room. The existence of this lodging facility invites the public and tourists to care about nature which is currently experiencing global warming. Therefore, the designer designed an accommodation facility that could inspire the public and tourists about eco-interior applications through application to hotel buildings. The hotel design shown how the application of Eco-Interior through 5 aspects of the approach, namely aspects of space organization, lighting systems, ventilation systems, material selection, and electromagnetic emissions.

Keywords: Eco-resort, hotel, interior

1. INTRODUCTION

Waisai is a tourist attraction which is known as a tourist center in Raja Ampat, West Papua. As Amr's coverage for Oktravel, the beauty and uniqueness of the nature and culture of the people in Waisai is a tourist attraction, which cannot be found in other areas [1]. Its natural beauty makes local and foreign tourists visiting for a vacation, but there are no lodging facilities that are able to meet the needs of visitors. Wishnutama said that although Waisai's tourism potential is very promising, access to it is very difficult [2]. Not only a matter of access to Waisai, in general infrastructure is needed to support the development of natural tourism in Waisai.

Hotel Meridian Adventure Marina Club & Resort Hotel is the only four-star hotel in Waisai, with the best and most comprehensive facilities for visitors. The modern design is entered by visitors, but it cannot represent the image of the hotel as an Eco-resort nor does it represent Papuan culture. Therefore, this design aims to provide lodging facilities that provide comfort and introduce eco-interior applications so visitors will get comfort, inspired and care for the surrounding environment through the application of eco-interiors to hotels.

The design problem in this hotel interior is the application of eco-interior be optimally applied to hotel design. The purpose of this design is to implement eco-interior aspects

into hotel design to provide insight and inspiration to the public and tourists about the application of eco-interiors.

The benefits of this design are increased knowledge and experience for designing an interior scope with a wider scale, increased knowledge of materials, how to process materials, and their application to interior spaces in accordance with the themes and concepts, increasing tourists' knowledge of sights and potential nature in Raja Ampat, as well as the increasing number of hotels in Raja Ampat with a different concept from other resort.

1.1. Related Work

Research held by Riadi [3] about interior of Pines Garden Resort at Tretes, Pasuruan, came to the result that rustic, warm design design concept would improve the hotel image and quality. The design would give new and different experience to visitors. This conclusion comes from the fact that the resort location is near to Kakek Bodo waterfall as travel destination.

Another research conducted by Kurniawan [4] pointed that Ethnic for The Future design concept has Pacitan Region identity with application of Java culture. Kurniawan showed that traditional concept do not mean depicting backwardness, but it has a local value which is unique to define from other region. With a futuristic accent, traditional concept would has new meaning of progression of the culture.

The interior theory that used in this research is taken from Kilmer book titled *Designing Interiors* [5] about hospitality design. The hotel spatial organization shows that the entry and lobby are the first area that visitors would see, they provide the first impression of a hotel. This information shows that eco-resort concept has to applied into lobby interior design as shown at Figure 1 below.



Figure 1 Lobby area

1.2. Our Contribution

Until now, there has been no research using the Meridian Adventure Marina Club & Resort Hotel in Waisai, Raja Ampat, as the object of research. A research of resourch development held by Hamsidah [6] focused on management aspect to develop the Waisai District potential. Therefore, this research is the first and is expected to contribute to improving the quality of accommodation in Waisai to support tourism development. Areas that have great potential in the tourism sector, which require support facilities. Procurement of facilities in the tourism sector must consider interior design issues that will reflect the vision and mission of the Meridian Adventure Marina Club & Resort Hotel, Waisai. Nearly all resort hotel interior design research focuses on natural or cultural themes separately.

This study combines the two concepts, as well as providing a new perspective on the concept of nature, namely eco-resorts. Not only giving natural proximity to hotel interior design, but optimizing natural potentials such as natural lighting, natural ventilation and how to minimize the impact of electromagnetic emissions [7].

1.3. Paper Structure

The rest of the paper is organized as follows. Section 2 introduces the preliminaries used in this paper, which include design problems, design objectives and researches with the same topic. Section 3 presents the design methods used to solve the design problem through design process. Section 4 discussing the application of eco-interior in the design of Meridian Adventure Marina Club & Resort, Waisai. Section 5 provides a conclusion on the interior design process for resort hotels in Waisai by applying eco-interiors

2. BACKGROUND

Global warming is one of the environmental issues that has become a major problem universally. This term has been widely discussed since the United Nations meeting discussing the Environment in Stockholm Sweden on June 15, 1972 [8]. In Indonesia, this term has been the topic of conversation since the National Development and Environmental Management Seminar was held on 15-18 May 1972.

Global warming is the process of increasing the average temperature of the Earth's atmosphere, oceans, and landmasses. This is due to an increase in the concentration of greenhouse gases because of human activity through the greenhouse effect. The impacts can affect various environmental aspects such as climate instability, rising sea temperatures and levels and ecological disturbances.

Lack of public awareness causes global warming to be a problem that cannot be fully resolved. For this reason, the role of the interior is very important to create a building design based on ecological principles. Ecological building design can be built with an eco-interior approach. Eco-interior is a part of eco-architecture that focuses on space users and the activities that occur in the space so that it can work in synergy with the environment and its surroundings [9].

Eco-architecture according to Frick and Suskiyatno [10] is a reciprocal existence between living things and their environment in the built environment. In this case, eco-interior is understood as an interior design approach that optimizes the potential of nature to reduce the use of fossil power sources, including electricity that comes from the country. The penetration of sunlight and natural air circulation that utilizes the principle of high-pressure air flow to low pressure air, then the use of fossil energy can be limited.

Building design based on eco-interior principles is a form of concern for global environmental issues that are currently being faced. This is the basis for the design, entitled "Interior ecio Design of the Meridian Adventure Marina Club & Resort Hotel Eco Resort in Waisai, Raja Ampat".

3. METHODS

The design method used is as follows:

- a. Field Data (including physical and non-physical data)
- b. Literature Data
- c. Typology Data

A. Data Collection Method

Techniques or methods used by the authors in collecting data. How to designate something that is abstract, cannot be realized in objects with the eyesight, but can only be shown its use, here are the data collection methods used: (1) Literature Study, observing theoretical data that can be used as a theoretical basis in design objects, such as literature data about hotels, obtained from books about hotels, mass media and final project reports on hotels; (2) Documentation Methods, data collection techniques to

obtain data sources through pictures and photoshoot. This can be obtained through the internet such as documentation photos relating to hotels.

B. Data Processing Methods

Data obtained from the field, comparative studies and collected literature. After that, data selection that has a relation with the design is carried out, such as space-forming elements, interior systems, structures, and existing data. The selected data will then be analyzed with several aspects of the interior that are used as a reference in the preparation of a table of needs program in an interior design (programming), create a concept and concept application in interior design of Meridian Adventure Marina Club and Resort Hotel.

C. Data Analysis Method

The analysis method used is descriptive and comparative methods. Descriptive method is to describe all field data obtained, both user data and field data. The comparative method by making comparisons or comparisons between field data and typological data, with literature reviews.

4. FINDINGS AND DISCUSSIONS

The basic idea of this design is the Hidden Gem of Raja Ampat, which is inspired by the natural beauty of Raja Ampat, Papua. The atmosphere of the beach and its attractive natural environment is a source of inspiration from the application in the interior of every space.

The character that you want to display in this design follows the natural atmosphere of a beach that has dynamic characters, has rhythm, and has motion. The application of this character appears in the circulation of space, interior elements and the form of furniture which is a stylization of natural forms.

Modern Natural is an interior style that is applied in this design which is a design style created in 1920-1950, based on "Form, Follow, Function". Modern design styles prioritize function rather than ornament or aesthetic elements of an object. The application of modern styles can be seen through the form of furniture and the use of materials. The use of colors using colors that tend to be cool colors (blue, green) and warm colors as accents. Cool colors have a calm and relaxing effect and can have the effect of lowering the temperature in areas that have excess heat.

The atmosphere that you want to create in this design is a comfortable and relaxed atmosphere so that visitors can feel closer to nature. Achieved by applying the colors, shapes and materials used.

The results of the analysis and interpretation of the discussion are described in this section. Interpretation can be in the form of ingredients from the results of the analysis, study of theories and researchers' thoughts. The author can describe the findings in a structured, detailed, complete and concise manner, so that readers can follow the flow of the analysis and researchers' discussions well. Shows the relationship between facts during observation. Logical argumentation of research implications.

1. Lobby

a. Room Organization

The division of the Lobby area is based on space and circulation requirements. The lobby is designed with space that can be connected visually and physically to the recreational area.

The circulation pattern in the receiving building is linear branching, which provides an alternative circulation for visitors. Circulation between visitors and staff can be divided into 2.

As it can be seen in the Figure 2, circulation of visitors staying through the main entrance, while visitors who do not stay through the main entrance, to the facilities at the receiving building, such as a restaurant, cafe, ballroom, and toilet. Circulation for staff can be done through the door next to the main entrance. The difference in circulation is to facilitate visitors and staff in terms of circulation efficiency and activities.

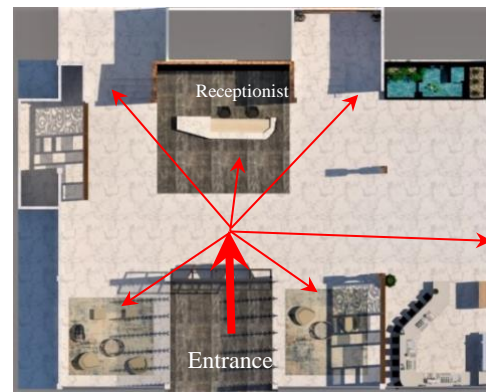


Figure 2 Lobby layout and circulation

b. Lighting Systems

The building design is in a beach area, away from roads and urban traffic. The lighting on the north side of the site is adjacent to the main road, the west and east sides of the site are bordered by the beach, and the south side of the site is bordered by lodging facilities.

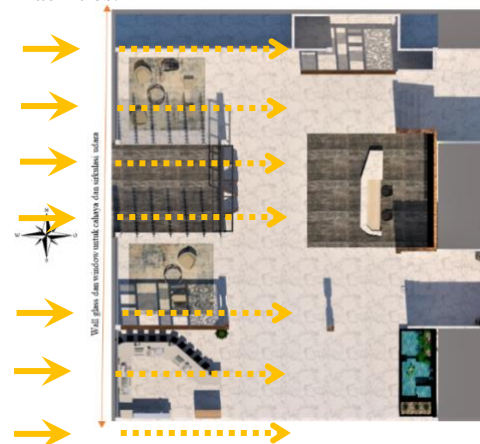


Figure 3 Natural light enters the lobby area

Figure 3 shows the lobby lighting system that is optimized by natural lighting, through the windows on the side of the room. The window overlooks the natural scenery around the location. This aims to minimize the use of excessive electrical energy in the morning and during the day. At night, the lighting used is artificial lighting because no sunlight is entering the room.



Figure 4 Artificial lighting applications in the lobby area

c. Ventilation System



Figure 5 Lobby area ventilation system

The main entrance of the building faces westward, which is adjusted to good air circulation, which is perpendicular to the cardinal directions. In general, the wind direction is east to west. In April to October, the wind blows from east to west, while in November to March, the wind blows from west to east. As seen in the Figure 5, the entrance allows the air flows into the lobby.

d. Material Selection



Figure 6 Application of marble tile to the lobby

The use of marble material in the Lobby area aims to give a luxurious impression because the Lobby is the center of attention of this hotel. Most of the walls in this design use marble material because marble material has a long life, thus reducing maintenance costs and material disposal.

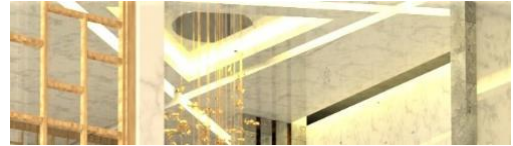


Figure 7 Ceiling leveling in the lobby area

The ceiling pattern adapts to a dynamic floor pattern. There is a ceiling leveling in the receptionist area which is useful to give the impression of a room that looks more dynamic and not monotonous. The material for the ceiling uses gypsum board and for finishing it uses environmentally friendly materials to reduce indoor pollution.

e. Electromagnetic Emission

Efforts to minimize electromagnetic emissions are by maximizing the use of natural lighting and ventilation, as well as energy efficient electronic equipment, such as the use of LED lights and energy saving switches.

2. Restaurant

a. Room Organization



Figure 8 Restaurant ambience

Division of Restaurant area based on space and circulation requirements. The flow of circulation is clear as well as a marked difference between the in-out or front-back directions. The size of the room has been determined with safety considerations

b. Lighting System

The lighting system in the restaurant area is artificial lighting because this area is in the middle of the building, so it doesn't get sunlight. The artificial lighting used is still oriented towards eco-interior applications. This is realized using energy-efficient lamps, such as LED lamps.



Figure 9 Application of energy saving lights in restaurant

c. Ventilation System

Artificial ventilation systems can be found in hotel rooms with the use of AC Split 2 PK inverter technology. This is for reasons of visitor convenience.

d. Material Selection

Another wall material used is scrap wood. This used wood is obtained from the rest of the furniture making which is coated and processed according to the design needs of each room. The utilization of this used wood appears on the accent wall at the Restaurant as seen in Figure 10.



Figure 10 Recycled wood on the restaurant wall

e. Electromagnetic Emission

Efforts to minimize electromagnetic emissions are by means of energy-efficient electronic equipment, such as the use of LED lamps and energy saving switches.

3. Guest Room

a. Room Organization

The spatial organization formed is a radial organization with the nature of activities that are closed from public activities.



Figure 11 Lighting applications in the guest room

This closed nature is intended to maintain the privacy of guests who stay, but still allows for the penetration of sunlight for room lighting during the day, and natural air circulation with windows that can be opened and closed.

b. Lighting System

Lighting comes from two sources, namely artificial and natural lighting. The artificial lighting used is the DN051b (Philips) LED downlight with 12 Watts power and a hidden lamp. The direction of lighting used is general lighting, it can spread light directly towards the focus of the illuminated surface and accent lighting is special lighting needed for special types of lighting, for example to highlight the details of interior elements.

There is also the use of sensors in hotel rooms, which also play an important role in this energy saving effort. With the use of sensors, the lights only turn on when the sensor detects that someone is in the room, and the lights can go out automatically when the sensor detects that the room is empty.

Natural lighting is obtained from the large windows in the guest room as seen in the Figure 12.

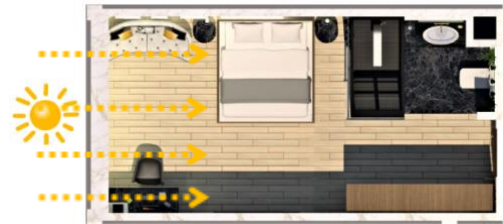


Figure 12 Natural lighting in the guest room

c. Ventilation System

The natural ventilation system can be divided into 2, namely active and passive ventilation systems. Active ventilation system in the form of window openings and dead openings, which allow cross ventilation as seen in the Figure 13. In addition, you can also add vegetation as an air filter so that the room feels cooler. The passive ventilation system uses shading techniques.



Figure 13 Guest room area ventilation system

d. Material Selection

The furniture used is divided into 2, namely furniture that comes from used goods (reuse, recycle) and furniture that has just been produced. An example of the application of reuse furniture is a

chair made of used wood with a transparent coating. The application of new furniture production is a bed with a blanket made of 100% cotton.



Figure 14 Furniture in the guest room

- e. Electromagnetic Emission
Electromagnetic emissions are minimized in this space by utilizing natural lighting through glass materials in windows and natural ventilation with windows that can be opened, as well as energy-efficient electronic equipment, such as the use of LED lamps, sensors and dimmers, IC cards and energy saving switches.

5. CONCLUSIONS

The interior design of the Eco Resort at the Meridian Adventure Marina Club & Resort Hotel in Waisai, Raja Ampat is a design that applies eco-interior principles with 5 approach aspects, namely aspects of space organization, lighting systems, ventilation systems, material selection, electromagnetic emissions.

The application of eco interior aspects to the space is carried out using various analyses. From the direction of the sun's circulation towards the building which affects the entry of sunlight into the room, the air temperature around the location which affects natural ventilation in space, the selection of materials that are environmentally friendly and have an efficiency value in the manufacturing and distribution processes, efforts to minimize electromagnetic emissions by using lighting and natural ventilation and the use of energy-efficient LED lamps as well as the use of ceiling fans and 0.5 PK AC.

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